

REMARKS

Claims 1-4 are pending herein, each of which is independent. No amendments are made to the claims herein.

In the pending Office Action, the Examiner has rejected claims 1-4 under 35 U.S.C. § 103(a) as allegedly obvious over United States Patent No. 6,447,132 (Harter) in view of United States Patent No. 5,760,760 (Helms). Applicant has carefully considered the Examiner's rejection, and the detailed comments provided in support thereof, and respectfully disagrees with the Examiner's conclusions. Accordingly, it is respectfully submitted that the pending claims present allowable subject matter in view of the combination of references applied by the Examiner.

The following discussion of the invention is offered for the convenience of the Examiner in considering the patentability of the claims, and is not intended to present or argue any limitations not set forth in the claims.

The present invention is directed to a method (claims 1 and 4) and apparatus (claims 2 and 3) for variably illuminating a flat panel display with two different types of illumination based on the level of ambient light. In bright light (*e.g.*, daylight) a fluorescent tube display illuminates the flat panel, while under low ambient light conditions (*e.g.*, nighttime) one or more LEDs illuminate the display. At an intermediate level of brightness (a "transition illumination level"), the two types of light are similarly combined to provide a seamless transition between the upper and lower ranges of illumination.

The invention provides two types of photosensors: one to monitor the light impinging on the panel, and one to monitor the level of generated light that is illuminating the panel. The two monitored levels are compared and the supply of operating power to the fluorescent & LED devices are adjusted so that the proper, intended level of light is output to illuminate the panel.

This combination of elements is nowhere taught or suggested by the references applied by the Examiner.

Harter discloses a two-level brightness control for a vehicle head up display (HUD) in which (Fig. 2) a high brightness light source 21 is operated to illuminate an image-projecting LCD electronic display 26 in bright or daylight conditions and a low brightness light source 22A, 22B is operated to illuminate the display in low light and nighttime conditions. Operation of the high and low brightness level light sources is based on ambient light conditions which are monitored by a light sensor 17 mounted on the outside of the vehicle. The Examiner acknowledges that Harter fails to disclose monitoring of the current display screen illumination level, or the provision of a display illumination level sensor for monitoring the current display screen illumination level, and providing that monitored level to a display screen illumination controller that is operable for illuminating the display screen at the desired display screen illumination level, as applicant's claims recite.

The Examiner cites the Helms reference in an effort to remedy that deficiency. Helms, however, fails to teach or suggest the missing subject matter of applicant's claims.

Helms discloses an LCD display screen brightness control system for a laptop or portable computer. That system simply monitors - and adjusts the illumination level of the computer's display screen based on - *ambient light* conditions; the Helms system does *not* in fact monitor the actual illumination level of the display, nor adjust the display illumination based on the actual, monitored display illumination level.

In the "alternate" embodiment of the control system discussed at Helms col. 2, lines 26-27 (to which the Examiner refers in the Office Action), the two photodetectors *both* monitor ambient light conditions. As that paragraph explains at col. 2, lines 26-34:

" In an alternative embodiment, a first photodetector is located proximate the front of the LCD and a second photodetector is located proximate the back of the LCD. *In this embodiment, the brighter ambient condition is used to control the brightness level of the LCD.* This embodiment is especially useful in situations in which light is directed toward the back of the LCD, and hence toward the user's eyes, which light, while affecting the visibility of the LCD, might not be detected by the first photodetector."]Emphasis supplied]

Thus, Helms simply provides an arrangement for adjusting the display screen illumination based on ambient light conditions in which photosensors are employed to detect light impinging on the display from both the front *and the rear* of the display, to thereby enhance the viewability of the display in harsh backlit conditions.

Helms does *not* teach, or disclose, or in any way suggest monitoring of the current display screen illumination level, and supply of that monitored level to a display screen illumination controller that is operable for illuminating the display screen at the desired display screen illumination level. Helms therefore fails supply any teaching or suggestion to remedy applicant's claimed subject matter that is not, as the Examiner has acknowledged, disclosed by Harter.


Applicant accordingly maintains that its invention, as recited in each of independent claims 1 to 4 of the application, is patentably distinct over the prior art. Withdrawal of the Section 103(a) rejection of the claims, and early notice of the allowance of the application, are once more solicited.

It is believed that no fees or charges are now believed due in connection with the present application; if any fees or charges are nevertheless required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

COHEN, PONTANI, LIEBERMAN & PAVANE

By

A handwritten signature in dark ink, appearing to be 'Lance J. Lieberman', written over a horizontal line.

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